

Docket/App No.: 2825.1023-001

Title: Novel Small Nuclear RNA Vectors ...

Inventors: David de Graaf and Eric S. Lander

10 20 30 40 50
GACGGATCGGGAGATCTCCCCGATCCSCTATGGTCGACTCTCAGTACAATC

60 70 80 90 100
TGCTCTGATGCCGCATAGTTAAGCCAGTATCTGCTCCCTGCTTGTGTGTT

110 120 130 140 150
GGAGGTCGCTGAGTAGTGCGCGAGCAAAATTTAAGCTACAACAAGGCAAG

160 170 180 190 200
GCTTGACCGACAATTGAGCTCGGTACCCGGGGAGATCCGGTAAGGACCAG

210 220 230 240 250
CTTCTTTGGGAGAGAACAGACGCGAGGGGCGGGAGGGAAAAAGGGAGAGGC

260 270 280 290 300
AGACGTCACCTCCCCCTTGCGGCTCTGGCAGCAGATTGGTCGGTTGAGTG

310 320 330 340 350
GCAGAAAGGCAGACGGGACTGGGCAAGGCACCTGTCGGTGACATCACGGA

360 370 380 390 400
CAGGGCGACTTCTATGTAGATGAGGCAGCGCAGAGGCTGCTGCTTCGCCA

410 420 430 440 450
CTTGCTGCTTCACCACGAAGGAGTTCCCGTGCCCTGGGAGCGGGTTTCAGG

460 470 480 490 500
ACCGCTGATCGGAAGTGAGAATCCGAGCTGTGTGTGTCAGGGCTGGAAAGGG

510 520 530 540 550
CTCGGGAGTGCGCGGGGCAAGTGACCGTGTGTGTAAAGAGTGAGGCGTAT

560 570 580 590 600
GAGGCTGTGTGGGGGAGAGGCCCAAGATCTCAAGGGCCCATACATGTG

610 620 630 640 650
TACCATCGATTGCAGGGGAGATACCATGATCACGAAGGTGGTTTTCCCG

660 670 680 690 700
GGCGAGGCTTATCCATTGCACTCCGGATGTGCTGACCCCTGCGATTTC

710 720 730 740 750
CRAAGCTTGGAACCTCGACTGCATAATTTGTGGTAGTGGGGGACTGCGTT

760 770 780 790 800
CGCGCTTTCCCTGACTTTCTGGAGTTTCAAAAGTAGACTGTACGCTAAC

810 820 830 840 850
CGGATCCTCTAGAGTCGACCTGCAGGCATGCAGAAGACAATTAGCAGGCA

860 870 880 890 900
TGCTGGGGATGCGGTGGGCTCTATGGCTTCTGAGGCGGAAAGAACAGCT

910 920 930 940 950
GGGGCTCTAGGGGGTATCCCCACGCGCCCTGTAGCGGCGCATTAAGCGCG

Fig. 1A

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960 970 980 990 1000
GCGGGTGTGGTGGTTACGCGCAGCGTGACCGCTACACTTGCCAGCGCCCT

1010 1020 1030 1040 1050
AGCGCCCGCTCCTTTTCGCTTCTCCCTTCCTTTCTCGCCACGTTGCGCG

1060 1070 1080 1090 1100
GCTTTCCCCGTCAAGCTCTAAATCGGGGCATCCCTTTAGGGTTCCGATTT

1110 1120 1130 1140 1150
AGTGCTTTACGGCACCTCGACCCCAAAAACTTGATTAGGGTGATGGTTC

1160 1170 1180 1190 1200
ACGTAGTGGGCCATCGCCCTGATAGACGGTTTTTTCGCCCTTTGACGTTGG

1210 1220 1230 1240 1250
AGTCCACGTTCTTTAATAGTGGACTCTTGTTCCAAACTGGAACAACACTC

1260 1270 1280 1290 1300
AACCCTATCTCGGTCTATCTCTTTTGATTATATAAGGGATTTTGGGGATTTTC

1310 1320 1330 1340 1350
GGCCTATTGGTTAAAAAATGAGCTGATTTAACA AAAATTTAACGCGAATT

1360 1370 1380 1390 1400
AATTCTGTGGAATGTGTGTCAGTTAGGGTGTGGAAGTCCCCAGGCTCCC

1410 1420 1430 1440 1450
CAGGCAGGCAGAAGTATGCAAAGCATGCATCTCAATTAGTCAGCAACCAG

1460 1470 1480 1490 1500
GTGTGGAAGTCCCCAGGCTCCCCAGCAGGCAGAAGTATGCAAAGCATGC

1510 1520 1530 1540 1550
ATCTCAATTAGTCAGCAACCATAGTCCCGCCCCCTAACTCCGCCCATCCCG

1560 1570 1580 1590 1600
CCCCTAATCCGCCCAGTTCCGCCCATTTCTCCGCCCATGGCTGACTAAT

1610 1620 1630 1640 1650
TTTTTTTTATTTATGCAGAGGCCGAGGCCGCTCTGCCTCTGAGCTATTCC

1660 1670 1680 1690 1700
AGAAGTAGTGAGGAGGCTTTTTTGGAGGCCCTAGGCTTTTGCAAAAAGCTC

1710 1720 1730 1740 1750
CCGGGAGCTTGTTATATCCATTTTCGGATCTGATCAGCACGTGTTGACAAAT

1760 1770 1780 1790 1800
TAATCATCGGCATAGTATATCGGCATAGTATAATRCGACAAAGGTGAGGAA

1810 1820 1830 1840 1850
CTAAACCATGGCCAAAGTTGACCAAGTGCCGTTCCGGTGCTCACCGCGCGCG

1860 1870 1880 1890 1900
ACGTCGCCCGAGCGGTGAGTTCTGGACCGACCGGCTCGGGTTCTCCCGG

Fig. 1B

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1910 1920 1930 1940 1950
GACTTCGTGGAGGACGACTTCGCCGGTGTGGTCCGGGACGACGTGACCCCT

1960 1970 1980 1990 2000
GTTTCATCAGCGCGGTCCAGGACCAGGTGGTGC CGGACAACACCCTGGCCCT

2010 2020 2030 2040 2050
GGGTGTGGGTGCGCGGCCTGGACGAGCTGTACGCCGAGTGGTCCGAGGTC

2060 2070 2080 2090 2100
GTGTCCACGAACCTCCCGGGACGCCTCCGGGCCGGCCATGACCGAGATCGG

2110 2120 2130 2140 2150
CGAGCAGCCGTGGGGGCGGGAGTTCGCCCTGCGCGACCCGGCCGGCAACT

2160 2170 2180 2190 2200
GCGTGCACTTCGTGGCCGAGGAGCAGGACTGACACGTGCTACGAGATTTTC

2210 2220 2230 2240 2250
GATTCCACCGCCGCCCTTCTATGAAAGGTTGGGCTTCGGAATCGTTTCCG

2260 2270 2280 2290 2300
GGACGCCCGGCTGGATGATCCTCCAGCGCGGGGATCTCATGCTGGAGTTCT

2310 2320 2330 2340 2350
TCGCCCACCCCAACTTGTATTGTCAGCTTATAATGGTTACAAATAAAGC

2360 2370 2380 2390 2400
AATAGCATCACAAATTTACAAATAAAGCATTTTTTTCACCTGCATTCTAG

2410 2420 2430 2440 2450
TTGTGGTTTTGTCCAAACTCATCAATGTATCTTATCATGTCTGTATACCGT

2460 2470 2480 2490 2500
CGACCTCTAGCTAGAGCTTGGCGTAATCATGGTCATAGCTGTTTCCTGTG

2510 2520 2530 2540 2550
TGAAATTGTTATCCGCTCACAATTCACACACACATACGAGCCGGAAGCAT

2560 2570 2580 2590 2600
AAAGTGTAAGCCCTGGGGTGCCTAATGAGTGAGCTAACTCACATTAAATTG

2610 2620 2630 2640 2650
CGTTGCGCTCACTGCCCGCTTTCCAGTCGGGAAACCTGTCGTGCCAGCTG

2660 2670 2680 2690 2700
CATTAATGAATCGGCCAACGCGCGGGGAGAGGCGGTTTGCGTATTGGGCG

2710 2720 2730 2740 2750
CTCTTCCGCTTCCTCGCTCACTGACTCGCTCGGCTCGGTGCTTCGGCTGC

2760 2770 2780 2790 2800
GGCGAGCGGTATCAGCTCACTCAAAGGCGGTAAATACGGTTATCCACAGAA

2810 2820 2830 2840 2850
TCAGGGGATAACGCAGGAAGAACATGTGAGCAAAAGGCCAGCAAAAGGC

Fig. 1C

2860 2870 2880 2890 2900
CAGGAACCGTAAAAAGGCCGCGTTGCTGGCGTTTTTCCATAGGCTCCGCC

2910 2920 2930 2940 2950
CCCCTGACGAGCATCACAAAAATCGACGCTCAAGTCAGAGGTGGCGAAAC

2960 2970 2980 2990 3000
CCGACAGGACTATAAAGATACCAGGCGTTTCCCCCTGGAAGCTCCCTCGT

3010 3020 3030 3040 3050
GCGCTCTCTGTTCGACCCCTGCCGCTTACCGGATACCTGTCCGCCTTTC

3060 3070 3080 3090 3100
TCCCTTCGGGAAGCGTGGCGCTTCTCAATGCTCACGCTGTAGGTATCTC

3110 3120 3130 3140 3150
AGTTCGGTGTAGGTCTGCTCCAGCTGGGCTGTGTGCACGAACCCCC

3160 3170 3180 3190 3200
CGTTCAGCCCCGACCGCTGCGCCTTATCCGGTAACTATCGTCTTGAGTCCA

3210 3220 3230 3240 3250
ACCCGGTAAGACACGACTTATCGCCACTGGCAGCAGCCACTGGTAACAGG

3260 3270 3280 3290 3300
ATTAGCAGAGCGAGGTATGTAGGCGGTGCTACAGAGTTCTTGAAGTGGTG

3310 3320 3330 3340 3350
GCCTAACTACGGCTACACTAGAAAGGACAGTATTTGGTATCTGCGCTCTGC

3360 3370 3380 3390 3400
TGAAGCCAGTTACCTTCGGAAAAAGAGTTGGTAGCTCTTGATCCGGCAAA

3410 3420 3430 3440 3450
CAAACCAACCGCTGGTAGCGGTGGTTTTTTTGTTCGAAGCAGCAGATTAC

3460 3470 3480 3490 3500
GCGCAGAAAAAAGGATCTCAAGAAGATCCTTTTGATCTTTTCTACGGGGT

3510 3520 3530 3540 3550
CTGACGCTCAGTGGAACGAAAACTCACGTTAAGGGATTTTGGTCATGAGA

3560 3570 3580 3590 3600
TTATCAAAAAGGATCTTCACCTAGATCCTTTTAAATTAAAAATGAAGTTT

3610 3620 3630 3640 3650
TAAATCAATCTAAAGTATATATGAGTAAACTTGGTCTGACAGTTACCAAT

3660 3670 3680 3690 3700
GCTTAATCAGTGAGGCACCTATCTCAGCGATCTGTCTATTTTCGTTTCATCC

3710 3720 3730 3740 3750
ATAGTTGCCTGACTCCCCGTCGTGTAGATAACTACGATACGGGAGGGCTT

3760 3770 3780 3790 3800
ACCATCTGGCCCCAGTGCTGCAATGATACCGCGAGACCCACGCTCACCGG

Fig. 1D

3810 3820 3830 3840 3850
 CTCCAGATTTATCAGCAATAAACCCAGCCAGCCGGAAGGGCCGAGCGCAGA

3860 3870 3880 3890 3900
 AGTGGTCCCTGCAACTTTATCCGCTCCATCCAGTCTATTAATTGTTGCCG

3910 3920 3930 3940 3950
 GGAAGCTAGAGTAAGTAGTTCCGCCAGTTAATAGTTTGCGCAACGTTGTG

3960 3970 3980 3990 4000
 CCATTGCTACAGGCATCGTGGTGTACGCTCGTCTGTTGGTATGGCTTCA

4010 4020 4030 4040 4050
 TTCAGCTCCGGTTCCCAACGATCAAGCCGAGTTACATGATCCCCCATGTT

4060 4070 4080 4090 4100
 GTGCAAAAAAGCGGTTAGCTCCTTCGGTCCCTCCGATCGTTGTCAGAAGTA

4110 4120 4130 4140 4150
 AGTTGGCCCGCAGTGTATCACTCATGGTTATGGCAGCACTGCATAATTCT

4160 4170 4180 4190 4200
 CTTACTGTTCATGCCATCCGTAAGATGCTTTTCTGTGACTGGTGAGTACTC

4210 4220 4230 4240 4250
 AACCAAGTCATTCTGAGAATAGTGTATGCGGCGACCGAGTTGCTCTTGCC

4260 4270 4280 4290 4300
 CGCGGTCAATACGGGATAATACCGCGCCACATAGCAGAACTTTAAAAGTG

4310 4320 4330 4340 4350
 CTCATCATTGGAAAACGTTCTTCGGGGCGAAAACCTCTCAAGGATCTTACC

4360 4370 4380 4390 4400
 GCTGTTGAGATCCAGTTCGATGTAACCCACTCGTGCACCCAACTGATCTT

4410 4420 4430 4440 4450
 CAGCATCTTTTACTTTTCACCAGCGTTTCTGGGTGAGCAAAAACAGGAAGG

4460 4470 4480 4490 4500
 CAAAATGCCGCAAAAAGGGAATAAGGGCGACACGGAATGTTGAATACT

4510 4520 4530 4540 4550
 CATACTCTTCTTTTCAATATTATTGAAGCAATTTATCAGGGTTATTGTC

4560 4570 4580 4590 4600
 TCATGAGCGGATACATATTTGAATGTATTTAGAAAAATTAACAAATAGGG

4610 4620 4630
 GTTCCGCGCACATTTCCCGAAAAAGTGCCACCTGACGTC

Fig. 1E

u1baelZeo

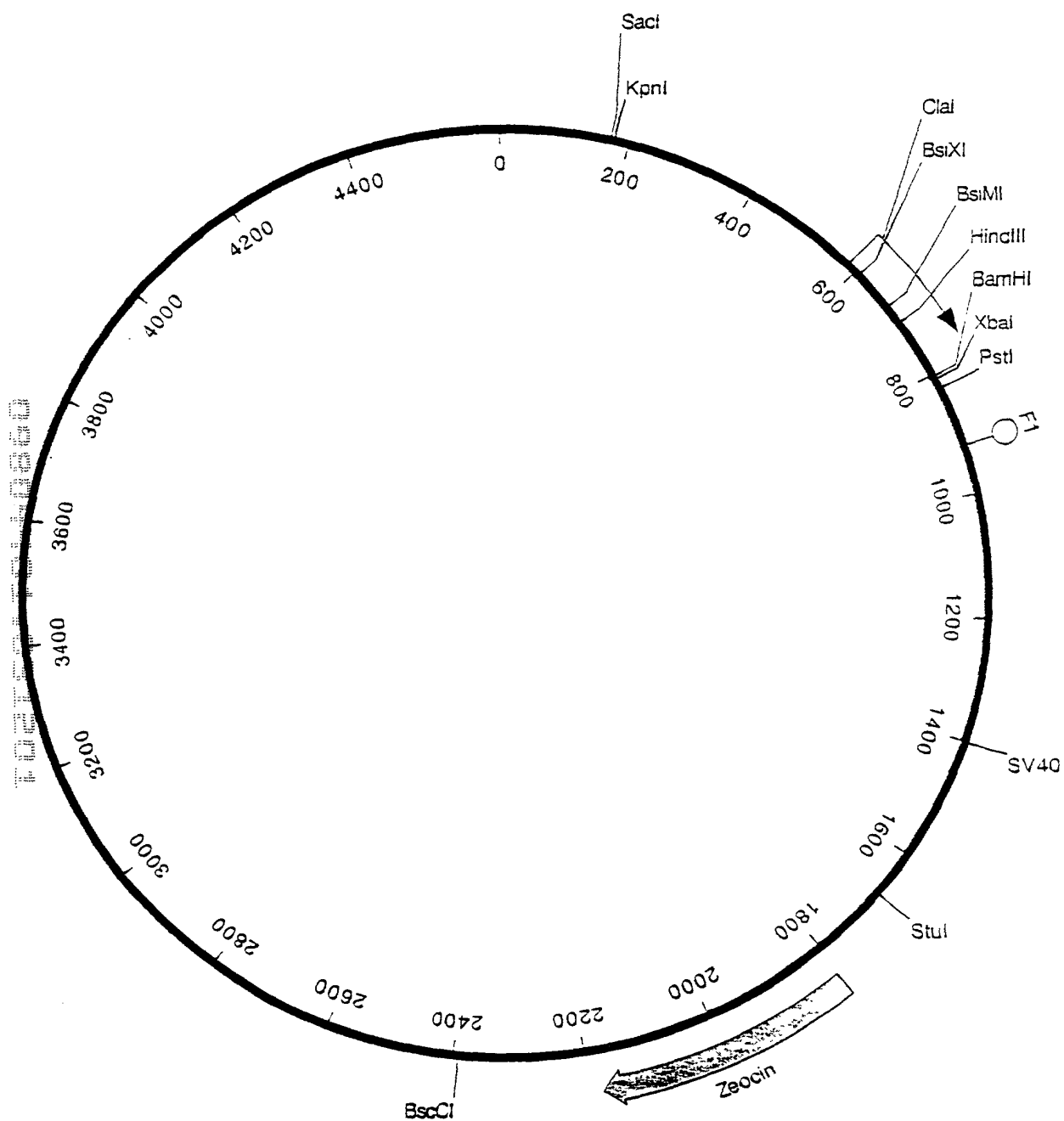


Fig. 2

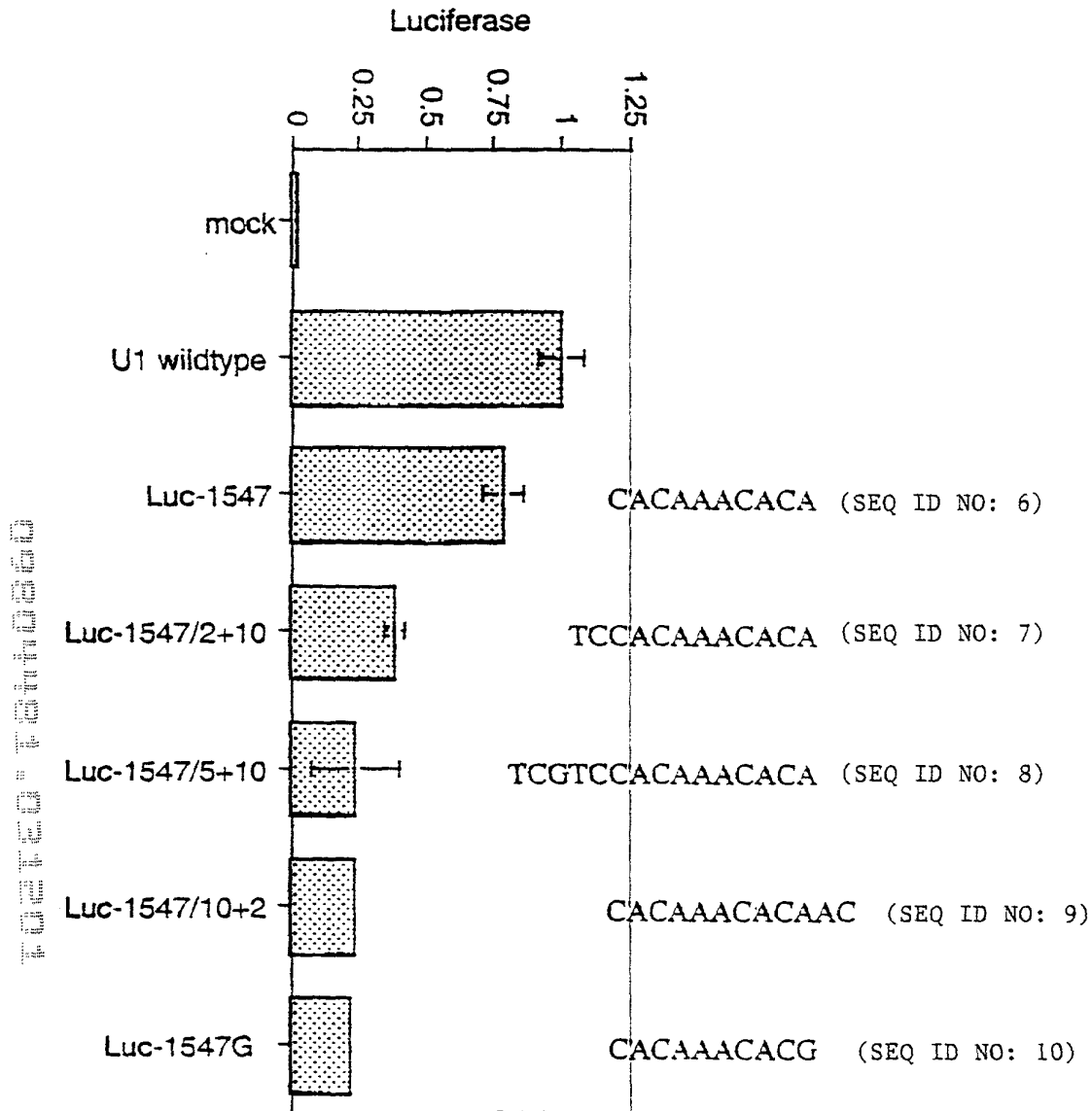


Fig. 3

Bae1/U1 construct

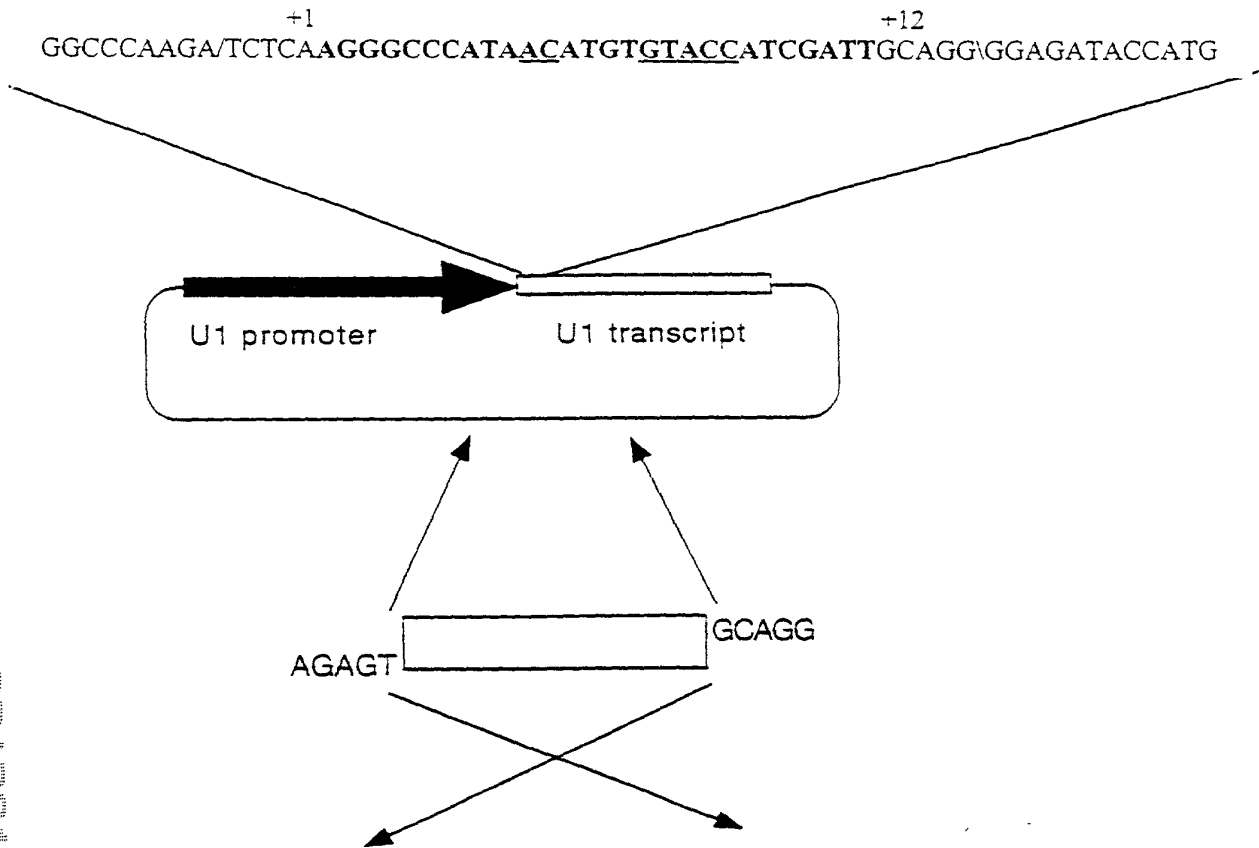


Fig. 4